



0807.68722

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Jung S. Moon et al.
Serial No.: 10/722,793
Conf. No.: 7220
Filed: November 26, 2003
For: COFFEE ROASTER HAVING AN
APPARATUS FOR INCREASING
AIRFLOW IN A ROASTING
CHAMBER
Art Unit: 1761
Examiner: Simone, Timothy F.

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November 7, 2007

Date

[Signature]
Registration No. 41,895
Attorney for Applicant(s)

APPELLANTS' BRIEF ON APPEAL UNDER 37 C.F.R. § 41.37

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Date: November 7, 2007



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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Appeal Brief is in support of Applicants' Notice of Appeal dated September 5, 2007, from the final rejection dated May 8, 2007.

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REAL PARTY IN INTEREST

The real party in interest in this case is Hearthware Home Products, Inc., 880 Lakeside Drive, Gurnee, IL 60061.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences related to this application.

STATUS OF CLAIMS

Claims 1, 3-9 and 11-18 are pending, and claims 2 and 10 have been canceled. The subject of this appeal is claims 1 and 15. Independent claim 9 and dependent claims 3-8 and 11-14 stand or fall with claim 1; and dependent claims 16-18 stand or fall with claim 15.

STATUS OF AMENDMENTS

The last amendment filed was Amendment D on February 16, 2007, which has been entered and considered. An amendment was not filed subsequent to the final Office Action mailed May 8, 2007.

SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 defines a roaster 10 (Figs. 1 and Replacement Fig. 12 filed January 27, 2006. A copy is attached as Exhibit A in the Evidence Appendix) for roasting coffee beans including a roasting chamber 14 having a top and a bottom, a cover 16 seated on the top of the roasting chamber 14, and a base 12 on which the bottom of the roasting chamber is seated. A fan 44 (Fig. 2 and Replacement Fig. 12 (Exh. A) is provided in the base 12 for supplying hot airflow into the roasting chamber 14 for heating coffee beans (Specification, pg. 4, lines 18-21). At least one air opening 107 is formed on the bottom of the roasting chamber 14 for enabling the airflow to enter the roasting chamber (Replacement Fig. 12 (Exh. A), and pg. 5, lines 7-10). A wind tunnel 106 is provided over the air opening 107 and has an inlet and an outlet for increasing the speed of the airflow in the roasting chamber as the airflow passes through and exits the wind tunnel (Replacement Fig. 12 (Exh. A), and pg. 11, lines 23-26). A coffee bean deflector 10 is positioned above the outlet of the wind tunnel 106 for deflecting the coffee beans carried by the airflow exiting the wind tunnel (Replacement Fig. 12 (Exh. A), and pg. 12, lines 3-6).

Claim 15 defines a roaster 10 (Fig. 1 and Replacement Fig. 12 (Exh. A) for roasting coffee beans, including a roasting chamber 14, a fan 44 for supplying heated airflow into the roasting chamber 14, and a cover 16 (Fig. 1) seated on top of the roasting chamber 14. At least one exhaust opening 62 (Replacement Fig. 12 (Exh. A) and Fig. 13) is provided

on the cover 16 for allowing smoke from said roasting chamber 14 to exit therefrom, while preventing coffee beans and chaff from escaping therethrough (pg. 12, lines 14-17).

A smoke vent attachment 124 (Replacement Fig. 12 (Exh. A) and Figs. 13-14) having a plurality of feet 132 for engaging corresponding plurality of mounting holes 122 (Replacement Fig. 12 (Exh. A) and Fig. 13) is formed on the cover 16 to enable the vent attachment 124 to be removably mounted on the cover 16 for receiving smoke exiting through the at least one exhaust opening on the cover. A plurality of arms 136 are configured and adapted to enable the vent attachment to be removably connected to an opening of an elongated external vent pipe 126 for channeling the smoke away from the roaster 10 (Replacement Fig. 12 (Exh. A) and Fig. 13).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1 and 15 are unpatentable under § 112, first paragraph, as failing to comply with the written description requirement.

Whether claims 1 and 15 are unpatentable under § 112, second paragraph, as being indefinite.

Whether claim 1 is unpatentable under § 103(a) over Hatanaka et al. (JP 04028976 A) in view of Gerhardt et al. (U.S. 6,053,093).

Whether claim 15 is unpatentable under § 103(a) over Hatanaka et al. (JP 04028976 A) in view of Helman et al. (U.S. 6,460,451).

ARGUMENT

I. THE REJECTION OF § 112, FIRST PARAGRAPH, AS FAILING TO COMPLY WITH THE WRITTEN DESCRIPTION REQUIREMENT IS IMPROPER.

A. The language, “coffee bean,” in claim 1 was added at the suggestion of the Examiner.

The term “coffee bean” was added to claim 1 and other dependent claims to modify the term “deflector” in Amendment D filed on February 16, 2007, at the suggestion of the Examiner during a telephone interview conducted between the Examiner and the undersigned on January 23, 2007. In the Interview Summary dated January 29, 2007 (Exh. B), the Examiner acknowledged that the parties “[d]iscussed proposed language to claims 1 and 9 with respect to the deflector element.” In the Remarks of Amendment D filed on February 16 (Exh. C), the Applicants confirmed that “[t]he Examiner suggested that Applicants amend claims 1 and 9 to more clearly describe that the claimed deflector is a ‘coffee bean deflector’ to distinguish from the heat deflector of Gerhardt et al. Independent claims 1 and 9 and some of the dependent claims have been amended as suggested.” The Examiner did not deny or refute the Applicants reasons for making the claim amendments.

B. The specification as originally filed adequately supports the language “coffee bean deflector” in claim 1.

The specification expressly states that,

[t]here is also a sufficient gap between the wind tunnel 106 and the deflector 110, so as to enable the coffee beans being carried by the airstream 116 to exit the wind tunnel freely and be deflected away by the deflector 110.

Page 12, lines 3-6. Emphasis added.

As clearly described, the claimed deflector is for deflecting coffee beans. Therefore, amending the claim to read “a coffee bean deflector... for deflecting the coffee beans” is not new matter, when the specification as originally filed clearly describes that the deflector is for deflecting coffee beans.

C. The specification as originally filed adequately supports the language, “exhaust opening” and “while preventing coffee beans and chaff from escaping therethrough,” in claim 15.

The support for the language that is rejected is provided in the specification on page 12, lines 14-17, which states that,

[t]hey give off smoke, which escapes through opening 62 in the cover 16. As shown in Fig. 13, the openings 62 similar to the embodiments shown above, are covered with a fine mesh screen 64 to retain the halls of the roasted beans within the receiver 58 of the cover 16.

The language of the specification clearly shows that “exhaust opening” and “while preventing coffee beans and chaff escaping therethrough” are not new matter.

II. THE REJECTION OF § 112, SECOND PARAGRAPH, AS BEING INDEFINITE IS IMPROPER.

A. When claim 1 is read in its entirety and in light of the specification as originally filed, the meaning of the airflow “exiting” the wind tunnel is clear.

Claim 1 expressly states that “said air flow passes through and exits said wind tunnel,” and not just that the air flow “exits” the wind tunnel. The specification also states that “the air stream exits the wind tunnel 106” (see specification page 11, line 25, for example) (emphasis added). It is clear that both the specification and the claim describe that the air flow passes through and exits the wind tunnel.

B. When claim 15 is read in its entirety and in light of the specification as originally filed, the meaning of the vent attachment being removably connected to an elongated vent pipe is clear.

The description of the smoke vent attachment is provided on page 12, lines 22-29 and page 13, lines 7-12, and shown in Replacement Fig. 12 (Exh. A) and Fig. 14. The concise description of the smoke vent attachment is self-explanatory.

III. THE REJECTION OF CLAIM 1 OVER HATANAKA ET AL. IN VIEW OF GERHARDT ET AL. IS IMPROPER.

A. Even if combined, the cited references still would not disclose or suggest the claimed coffee bean deflector positioned above the outlet of the wind tunnel for deflecting coffee beans carried by the airflow exiting the wind tunnel.

The present invention is directed to a roaster 10 for roasting coffee beans including a wind tunnel 106 provided over an air opening 107 on the bottom of a roasting chamber 14. The wind tunnel increases the speed of airflow, thereby allowing the same amount of beans to be roasted at a lower motor RPM. A deflector 110 is positioned above the outlet of the wind tunnel for deflecting the coffee beans carried by the airflow exiting the wind tunnel. Replacement Fig. 12 (Exh. A) best illustrates the claimed coffee bean deflector.

The Hatanaka et al. reference discloses in Fig. 1, a coffee bean roaster which provides both radiant and convection heating for roasting coffee beans. The roaster includes a glass pipe 14 which fits partially into a roasting chamber 1 at one end. The roaster also includes a channel separation cylinder 13 arranged generally concentric with the glass pipe 14 and is spaced above the bottom of the roasting chamber 1. Coffee beans enter the channel separation cylinder 13 through an inlet opening at the bottom and are carried through the channel separation cylinder by a hot airflow generated at the bottom of the roasting chamber 1. The beans exit the channel separation cylinder 13 through an outlet at the top and falls to the bottom of the roasting chamber through the space between the channel separation cylinder 13 and the glass pipe 14.

As clearly shown in Fig. 1 of the reference, the device of Hatanaka et al. does not disclose (or suggest) a deflector, for deflecting the coffee beans that exit from the channel separation cylinder 13, as in the present invention.

The Gerhardt et al. reference discloses a coffee roaster 10 including controls for controlling the roasting parameters of the roasting process. As shown in Fig. 1, the Gerhardt et al. reference discloses a roasting basket 21 which rotates to roast and remove chaff from the beans. The chaff drop from the rotating basket 21 and collect in a chaff collection tray 34. The beans in the roasting basket 21 are heated by heating elements 31 (not shown in the Figures). The reference discloses that “[h]eat from heating element 31 is uniformly maintained in the roasting basket 21 via inner heat deflector cone 32” (emphasis added) (col. 3, lines 56-57). Thus, the Gerhardt et al. reference expressly teaches a heat deflector cone, but does not disclose (or suggest) a coffee bean deflector for deflecting coffee beans carried by the airflow exiting the wind tunnel, as in the present invention.

It is apparent that neither the Hatanaka et al. reference nor the Gerhardt et al. reference teaches a coffee bean deflector positioned above the outlet of the wind tunnel for deflecting coffee beans carried by the airflow exiting the wind tunnel. Therefore, even if these references were combined, the resulting device still would not disclose or suggest this feature of the invention.

Moreover, the heat deflector cone 32 of Gerhardt et al. is provided outside the roasting chamber and the coffee beans never come in contact with the heat deflector cone 32.

Therefore, even assuming that it were possible to combine Gerhardt et al. with Hatanaka et al., the resulting device would include a heat deflector cone provided outside the roasting basket as taught by Gerhardt et al. Therefore, the heat deflector cone of Gerhardt et al. cannot function as a deflector for deflecting coffee beans in the combination suggested by the Examiner.

IV. THE REJECTION OF CLAIM 15 OVER HATANAKA ET AL. IN VIEW OF HELMAN ET AL. IS IMPROPER.

A. Even if combined, the Hatanaka et al. and Helman et al. still would not disclose or suggest the claimed exhaust opening provided on the cover of the roasting chamber.

As described in claim 15, the present invention includes a cover 16 seated on the top of the roasting chamber 14 and includes at least one exhaust opening 62 for allowing smoke to exit, while preventing coffee beans and hulls or chaff from escaping through the exhaust opening.

The device of Hatanaka et al. includes a structure 15 which is attached to the top of the glass pipe (14) and connected to a hopper (16). A shutter (17) is provided between the hopper (16) and the structure (15) for allowing coffee beans to be deposited in the roasting chamber (1). “The exhaust of the hot air used for roasting is discharged through the discharge hole (21)” (page 6, third paragraph). The discharge hole (21) connected to the roasting glass pipe 14 through an exhaust passage (18), and not provided on the structure

(15). In operation, “fresh coffee beans in a predetermined amount, for example, are put into the roasting chamber (1) through the projection hopper (16) by opening the shutter (17), and the shutter (17) is closed” (emphasis added) (pg. 6, second paragraph).

The structure (15) of Hatanaka et al., which the Examiner equates with the claimed cover, is connected to the hopper (16) by the shutter (17) which is open only to deposit coffee beans into the roasting chamber and then “the shutter (17) is closed.” Accordingly, the structure (15) does not disclose the claimed exhaust opening provided on the cover for allowing smoke from the roasting chamber to exit, since the shutter (17) is closed during the operation when smoke would be produced.

Keeping the shutter (17) open during operation would allow coffee beans and chaff to escape through the structure (15) in the device of Hatanaka et al. In contrast, the exhaust opening of the present invention prevents coffee beans and chaff from escaping. For these reasons, the structure (15) of Hatanaka et al. does not disclose or suggest the claimed cover having the exhaust opening.

B. Even if combined, the Hatanaka et al. and Helman et al. still would not disclose or suggest the claimed smoke vent attachment for channeling smoke away from the roaster.

Claim 15 also describes a smoke vent attachment 124 removably mounted on the cover 16 for receiving smoke exiting through the exhaust opening on the cover. The smoke vent attachment 124 includes a plurality of feet for engaging mounting holes on the

cover and a plurality of arms for enabling the vent attachment to be connected to an opening of an external vent pipe.

The Examiner contends that the structure (16) of Hatanaka et al. is “capable of functioning as a smoke vent attachment” of the present invention. The Hatanaka et al. reference clearly and expressly states that the projection hopper 16 is for putting fresh coffee beans into the roasting chamber (1). The reference itself simply does not disclose, suggest or teach that the projection hopper (16) is “capable of functioning as a smoke vent attachment,” as asserted by the Examiner.

The Helman et al. reference is directed to a popcorn maker, and not a coffee roaster as in the present invention. Nevertheless, the Examiner cites the Helman et al. reference for disclosing the claimed smoke vent attachment of the present invention. A top 178, shown in Fig. 2, having a centrally located hole 180 is cited as disclosing the claimed smoke vent attachment.

Contrary to the Examiner’s assertion, the top 178 is not for venting smoke. Rather, the top 178 provides a hole 180 through which a measured amount of corn kernels are poured into for popping in a chamber 94. During operation, the hole 180 is covered with a measuring disk 207. Rather than the top 178, the Helman et al. reference provides holes 176 on the side of the chamber 94 for venting access heat from the popcorn maker 10 (see col. 11, lines 41-43 and Fig. 1). Accordingly, the top 178 of Helman et al. does not disclose or suggest the claimed smoke vent attachment. Therefore, even if Helman et al. were

combined with Hatanaka et al., the resulting device still would not disclose or suggest the claimed smoke vent attachment features of the present invention.


With respect to the claimed plurality of feet and arm structures that are provided on the smoke vent attachment, the Examiner merely states that “it would have been an obvious matter of design choice” to have these features as recited in the claims. The Examiner has not provided any support for his position, and therefore, has not satisfied his burden in making this rejection.

CONCLUSION

For the foregoing reasons, Applicants respectfully request the rejection of claims 1 and 15, and their related dependent claims be reversed, with instructions to allow this application.

Respectfully submitted,

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By 
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November 7, 2007

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CLAIMS APPENDIX

1. (Previously Presented) A roaster for roasting coffee beans comprising:
 - a roasting chamber having a top and a bottom;
 - a cover seated on said top of said roasting chamber;
 - a base on which said bottom of said roasting chamber is seated;
 - a fan provided in said base for supplying hot airflow into said roasting chamber for heating coffee beans;
 - at least one air opening formed on said bottom for enabling said airflow to enter said roasting chamber;
 - a wind tunnel provided over said at least one air opening and having an inlet and an outlet for increasing the speed of said airflow in said roasting chamber as said airflow passes through and exits said wind tunnel; and
 - a coffee bean deflector positioned above said outlet of said wind tunnel for deflecting the coffee beans carried by said airflow exiting said wind tunnel.
2. (Canceled)
3. (Previously Presented) The roaster as defined in claim 1 wherein said coffee bean deflector is attached to said bottom of said roasting chamber by an elongated post, and said wind tunnel is suspended from said deflector by a plurality of support arms.

4. (Original) The roaster as defined in claim 3 wherein said wind tunnel is spaced above said at least one opening to enable the coffee beans from said bottom of said roasting chamber to be carried into said wind tunnel by said airflow.

5. (Original) The roaster as defined in claim 4 wherein said wind tunnel has a generally cylindrical configuration and a diameter which substantially encompasses said at least one opening on said bottom of said roasting chamber.

6. (Previously Presented) The roaster as defined in claim 1 wherein said coffee bean deflector has a rounded top for preventing coffee beans from resting on a top of said deflector.

7. (Original) The roaster as defined in claim 1 wherein said wind tunnel is spaced above said openings to enable the coffee beans from said bottom of said roasting chamber to be carried into said wind tunnel by said airflow.

8. (Original) The roaster as defined in claim 7 wherein said wind tunnel has a generally cylindrical configuration and a diameter which substantially encompasses said at least one opening on said bottom of said roasting chamber.

9. (Previously Presented) An apparatus for increasing airflow in a coffee bean roaster including a roasting chamber having a top and a bottom, a cover seated on the top of the roasting chamber, a base on which the bottom of the roasting chamber is seated, and at least one air opening formed on the bottom of the roasting chamber for enabling airflow to enter the roasting chamber from a fan provided in the base, said apparatus comprising:

a wind tunnel provided over the air opening and having an inlet and an outlet for increasing the speed of the airflow in said roasting chamber as the airflow passes through and exits said wind tunnel;

a plurality of support arms for suspending said wind tunnel above the at least one air opening on the bottom of the roasting chamber; and

a coffee bean deflector positioned substantially above said outlet of said wind tunnel for deflecting coffee beans carried by the airflow exiting said wind tunnel.

10. (Canceled)

11. (Previously Presented) The apparatus as defined in claim 9 wherein said deflector is attached to the bottom of the roasting chamber by an elongated post, and the wind tunnel is suspended from said deflector by said plurality of support arms.

12. (Original) The apparatus as defined in claim 11 wherein said wind tunnel is spaced above the opening to enable coffee beans from the bottom of the roasting chamber to be carried into said wind tunnel by the airflow.

13. (Original) The apparatus as defined in claim 12 wherein said wind tunnel has a diameter which substantially encompasses the opening on the bottom of the roasting chamber.

14. (Previously Presented) The apparatus as defined in claim 9 wherein said coffee bean deflector has a rounded top for preventing coffee beans from resting on top of said deflector.

15. (Previously Presented) A roaster for roasting coffee beans, comprising:
a roasting chamber;
a fan for supplying heated airflow into said roasting chamber;
a cover seated on top of said roasting chamber;
at least one exhaust opening provided on said cover for allowing smoke from said roasting chamber to exit therefrom, while preventing coffee beans and chaff from escaping therethrough; and

a smoke vent attachment having a plurality of feet for engaging corresponding plurality of mounting holes formed on said cover to enable said vent attachment to be removably mounted on said cover for receiving smoke exiting through said at least one exhaust opening on said cover, and a plurality of arms configured and adapted to enable said vent attachment to be removably connected to an opening of an elongated external vent pipe for channeling the smoke away from said roaster.

16. (Previously Presented) The roaster as defined in claim 15 wherein said smoke vent attachment includes a substantially cylindrical ring portion having a diameter which encompasses said at least one opening on said cover.

17. (Previously Presented) The roaster as defined in claim 16 wherein said plurality of arms are attached to and extend from a first end of said ring portion, and are configured to extend beyond a circumference of said ring portion.

18. (Previously Presented) The roaster as defined in claim 17 wherein said plurality of feet are attached to and extend from a second end of said ring portion.

EVIDENCE APPENDIX

Exhibit A is a copy of Replacement Fig. 12 filed January 27, 2006.

Exhibit B is a copy of Examiner's Interview Summary dated January 29, 2007.

Exhibit C is a copy of Amendment D filed February 16, 2007.

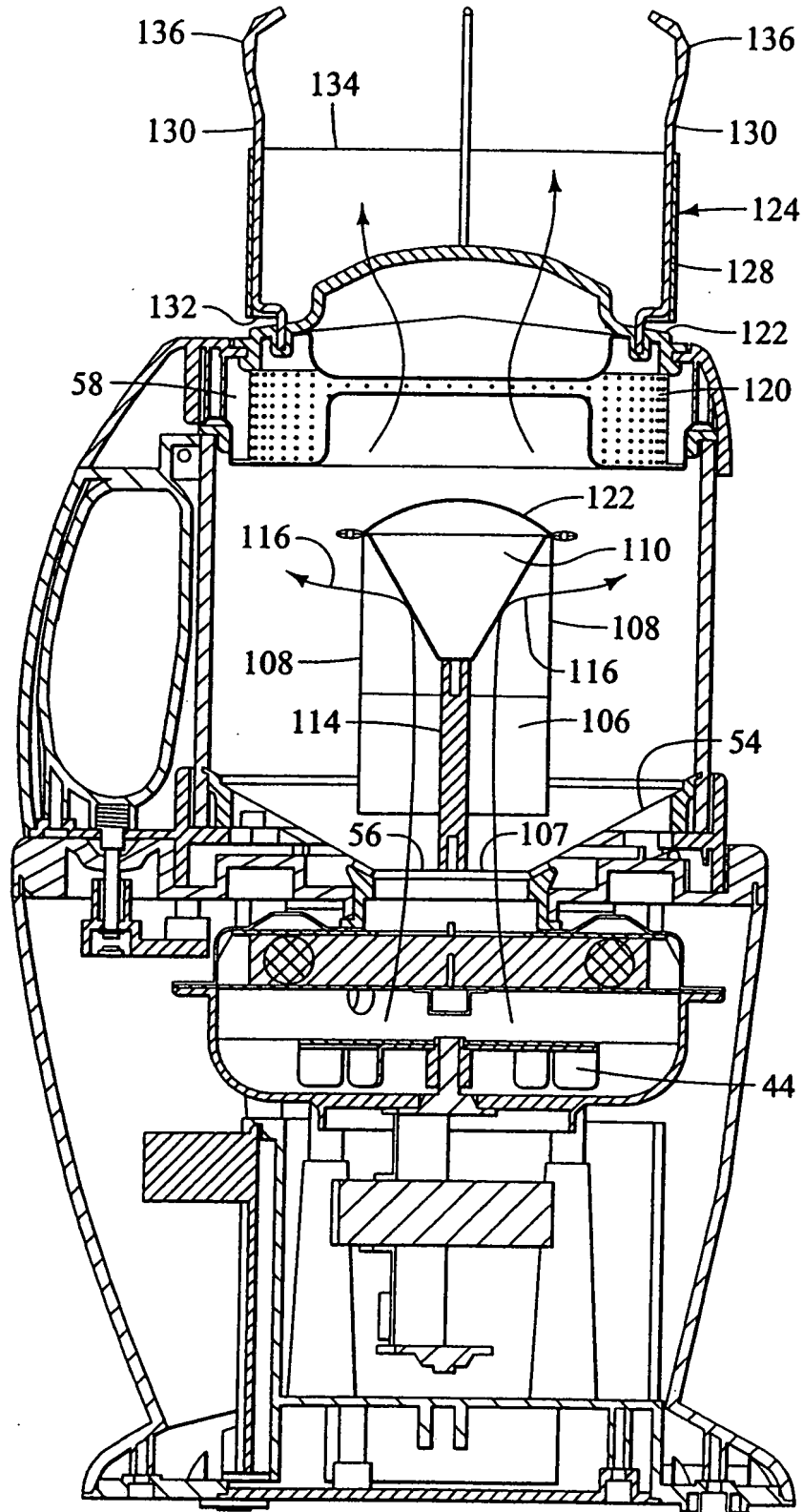


FIG. 12

EXHIBIT

A



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,793	11/26/2003	Jung S. Moon	0807.68722	7220

7590 01/29/2007
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EXAMINER

SIMONE, TIMOTHY F

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1761

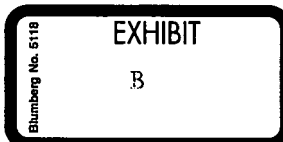
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

2007 FEB -5 AM 10:50



Interview Summary

Application No.

10/722,793

Applicant(s)

MOON ET AL.

Examiner

Timothy F. Simone

Art Unit

1761

All participants (applicant, applicant's representative, PTO personnel):

(1) Timothy F. Simone.

(3) _____

(2) Mr. Kim.

(4) _____

Date of Interview: 23 January 2007.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.

If Yes, brief description: _____

Claim(s) discussed: 1 and 9.

Identification of prior art discussed: art of record.

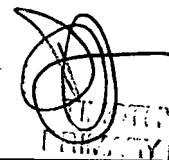
Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Discussed proposed language to claims 1 and 9 with respect to the deflector element.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.


TIMOTHY F. SIMONE
PATENT EXAMINER

Examiner's signature, if required

0807.68722

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

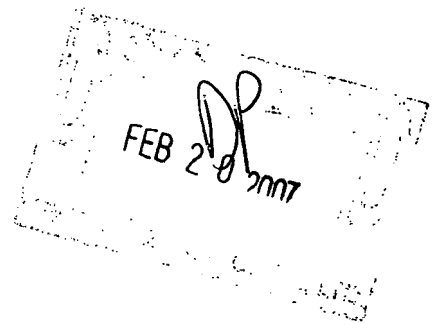
In re U.S. Application of:)
Applicant(s): Jung S. Moon et al.)
Serial No.: 10/722,793)
Conf. No.: 7220)
Filed: November 26, 2003)
For: COFFEE ROASTER HAVING)
AN APPARATUS FOR)
INCREASING AIRFLOW IN A)
ROASTING CHAMBER)
Art Unit: 1761)
Examiner: Simone, Timothy F.)

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February 16, 2007

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[Signature]
Attorney for Applicant(s)
Registration No. 41,895

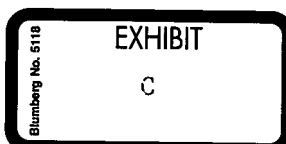


AMENDMENT D

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated October 16, 2006, please amend the above-identified Application as follows:



In the Claims:

Please amend claims 1, 3, 6, 9, 14 and 15. The status of the claims is as follows:

1. (Currently Amended) A roaster for roasting coffee beans comprising:
 - a roasting chamber having a top and a bottom;
 - a cover seated on said top of said roasting chamber;
 - a base on which said bottom of said roasting chamber is seated;
 - a fan provided in said base for supplying hot airflow into said roasting chamber for heating coffee beans;
 - at least one air opening formed on said bottom for enabling said airflow to enter said roasting chamber;
 - a wind tunnel provided over said at least one air opening and having an inlet and an outlet for increasing the speed of said airflow in said roasting chamber as said airflow passes through and exits said wind tunnel; and
 - a coffee bean deflector positioned above said outlet of said wind tunnel for deflecting the coffee beans carried by said airflow exiting said wind tunnel.

2. (Canceled)

3. (Currently Amended) The roaster as defined in claim 1 wherein said coffee bean deflector is attached to said bottom of said roasting chamber by an elongated post, and said wind tunnel is suspended from said deflector by a plurality of support arms.

4. (Original) The roaster as defined in claim 3 wherein said wind tunnel is spaced above said at least one opening to enable the coffee beans from said bottom of said roasting chamber to be carried into said wind tunnel by said airflow.

5. (Original) The roaster as defined in claim 4 wherein said wind tunnel has a generally cylindrical configuration and a diameter which substantially encompasses said at least one opening on said bottom of said roasting chamber.

6. (Currently Amended) The roaster as defined in claim 1 wherein said coffee bean deflector has a rounded top for preventing coffee beans from resting on a top of said deflector.

7. (Original) The roaster as defined in claim 1 wherein said wind tunnel is spaced above said openings to enable the coffee beans from said bottom of said roasting chamber to be carried into said wind tunnel by said airflow.

8. (Original) The roaster as defined in claim 7 wherein said wind tunnel has a generally cylindrical configuration and a diameter which substantially encompasses said at least one opening on said bottom of said roasting chamber.

9. (Currently Amended) An apparatus for increasing airflow in a coffee bean roaster including a roasting chamber having a top and a bottom, a cover seated on the top of the roasting chamber, a base on which the bottom of the roasting chamber is seated, and at least one air opening formed on the bottom of the roasting chamber for enabling airflow to enter the roasting chamber from a fan provided in the base, said apparatus comprising:

a wind tunnel provided over the air opening and having an inlet and an outlet for increasing the speed of the airflow in said roasting chamber as the airflow passes through and exits said wind tunnel;

a plurality of support arms for suspending said wind tunnel above the at least one air opening on the bottom of the roasting chamber; and

a coffee bean deflector positioned substantially above said outlet of said wind tunnel for deflecting coffee beans carried by the airflow exiting said wind tunnel.

10. (Canceled)

11. (Previously Presented) The apparatus as defined in claim 9 wherein said deflector is attached to the bottom of the roasting chamber by an elongated post, and the wind tunnel is suspended from said deflector by said plurality of support arms.

12. (Original) The apparatus as defined in claim 11 wherein said wind tunnel is spaced above the opening to enable coffee beans from the bottom of the roasting chamber to be carried into said wind tunnel by the airflow.

13. (Original) The apparatus as defined in claim 12 wherein said wind tunnel has a diameter which substantially encompasses the opening on the bottom of the roasting chamber.

14. (Currently Amended) The apparatus as defined in ~~claim 10~~ claim 9 wherein said coffee bean deflector has a rounded top for preventing coffee beans from resting on top of said deflector.

15. (Currently Amended) A roaster for roasting coffee beans, comprising:
a roasting chamber;
a fan for supplying heated airflow into said roasting chamber;
a cover seated on top of said roasting chamber;
at least one exhaust opening provided on said cover for allowing smoke from said roasting chamber to exit therefrom, while preventing coffee beans and chaff from escaping therethrough; and
a smoke vent attachment having a plurality of feet for engaging corresponding plurality of mounting holes formed on said cover to enable said vent attachment to be

removably mounted on said cover for receiving smoke exiting through said at least one exhaust opening on said cover, and a plurality of arms configured and adapted to enable said vent attachment to be removably connected to an opening of an elongated external vent pipe for channeling the smoke away from said roaster.

16. (Previously Presented) The roaster as defined in claim 15 wherein said smoke vent attachment includes a substantially cylindrical ring portion having a diameter which encompasses said at least one opening on said cover.

17. (Previously Presented) The roaster as defined in claim 16 wherein said plurality of arms are attached to and extend from a first end of said ring portion, and are configured to extend beyond a circumference of said ring portion.

18. (Previously Presented) The roaster as defined in claim 17 wherein said plurality of feet are attached to and extend from a second end of said ring portion.

REMARKS

As a preliminary matter, Applicants thank the Examiner for the courtesy extended to their attorney, B. Joe Kim, during the telephone interview conducted on January 23, 2007. In the interview, Applicant's attorney argued mainly that the claimed deflector deflects coffee beans carried by the airflow. In contrast, the cited Gerhardt et al. reference discloses a heat deflector cone for uniformly maintaining heat in the roasting basket. The Examiner suggested that Applicants amend claims 1 and 9 to more clearly recite that the claimed deflector is a "coffee bean deflector," to distinguish from the heat deflector of Gerhardt et al. Independent claims 1 and 9 and some of the dependent claims have been amended as suggested. The arguments presented below traversing the rejection of claims 1, 3-9 and 11-14 reflect the points presented by Applicants' attorney during the interview.

Claims 1, 3-9 and 11-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatanaka et al. in view of Gerhardt et al. Applicants respectfully traverse this rejection, because the cited references, alone or in combination, do not disclose or suggest the claimed coffee bean deflector positioned above the outlet of the wind tunnel for deflecting coffee beans carried by the airflow exiting the wind tunnel.

The Hatanaka et al. reference discloses a coffee bean roaster which provides both radiant and convection heating for roasting coffee beans. The roaster includes a glass pipe (14) which fits into a roasting chamber (1). The roaster also includes a channel separation cylinder (13) arranged generally concentric with the glass pipe and is spaced above the bottom of the roasting chamber. Coffee beans are carried through the channel

separation cylinder by a hot airflow generated at the bottom of the roasting chamber, and exit the channel separation cylinder through an outlet at the top. The channel separation cylinder of Hatanaka et al. includes an inlet opening through which the beans enter and an outlet opening through which the beans exit the channel separation cylinder. As clearly shown in Fig. 1 of the reference, the device of Hatanaka et al. does not disclose (or suggest) any means, i.e., a coffee bean deflector, for deflecting the coffee beans that exit from the channel separation cylinder, as in the present invention.

The Gerhardt et al. reference discloses a coffee roaster including controls for controlling the roasting parameters of the roasting process. Gerhardt et al. teaches using a roasting basket 21 which rotates to roast and remove chaff from the beans which drop from the rotating basket and collect in a chaff collection tray 34. The beans in the roasting basket 21 are heated by heating elements 31 (not shown in the Figures). The reference teaches that “[h]eat from heating element 31 is uniformly maintained in the roasting basket 21 via inner heat deflector cone 32” (emphasis added) (col. 3, lines 56-57). Thus, Gerhardt et al. teach a heat deflector cone, but does not disclose (or suggest) a coffee bean deflector for deflecting coffee beans carried by the airflow exiting the wind tunnel, as in the present invention.

Neither the Hatanaka et al. reference nor the Gerhardt et al. reference teaches a coffee bean deflector positioned above the outlet of the wind tunnel for deflecting coffee beans carried by the airflow exiting the wind tunnel. Therefore, even if these references were combined, the resulting device still would not disclose or suggest this feature of the

invention. For this reason, independent claims 1 and 9, and their respective dependent 3-8 and 11-14, are allowable over the cited reference.

Claims 15-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatanaka et al. in view of Helman et al. Applicants respectfully traverse this rejection because the cited references, alone or in combination, do not disclose or suggest the claimed exhaust opening provided on the cover of the roasting chamber. The references also do not disclose or suggest the claimed smoke vent attachment for channeling smoke away from the roaster.

As described in claim 15, the present invention includes a cover seated on the top of the roasting chamber and includes at least one exhaust opening for allowing smoke to exit, while preventing coffee beans and hulls or chaff from escaping through the exhaust opening. A smoke vent attachment is removably mounted on the cover for receiving smoke exiting through the exhaust opening on the cover. The smoke vent attachment includes a plurality of feet for engaging mounting holes on the cover and a plurality of arms for enabling the vent attachment to be connected to an opening of an external vent pipe.

The device of Hatanaka et al. includes a structure 15 which is attached to the top of the glass pipe (14) and connected to a hopper (16). A shutter (17) is provided between the hopper (16) and the structure (15) for allowing coffee beans to be deposited in the roasting chamber (1). "The exhaust of the hot air used for roasting is discharged through the discharge hole (21)" (page 6, third paragraph). In operation, "fresh coffee beans in a predetermined amount, for example, are put into the roasting chamber (1) through the

projection hopper (16) by opening the shutter (17), and the shutter (17) is closed” (emphasis added) (pg. 6, second paragraph).

The structure (15) of Hatanaka et al., which the Examiner equates with the claimed cover, is connected to the hopper by the shutter which is open only to deposit coffee beans into the roasting chamber and then “the shutter (17) is closed.” Accordingly, the structure (15) does not disclose the claimed exhaust opening provided on the cover for allowing smoke from the roasting chamber to exit, since the shutter (17) is closed during the operation when smoke would be produced. Keeping the shutter open during operation would allow coffee beans and chaff to escape through the structure (15). The exhaust opening of the present invention also prevents coffee beans and chaff from escaping. Therefore, the structure (15) of Hatanaka et al. does not disclose or suggest the claimed cover having the exhaust opening. The smoke venting function is performed by the discharge hole (21) in Hatanaka et al.

The Examiner contends that the structure (16) of Hatanaka et al. is “capable of functioning as a smoke vent attachment” of the present invention. The Hatanaka et al. reference clearly and expressly states that the projection hopper 16 is for putting fresh coffee beans into the roasting chamber (1). The reference simply does not disclose, suggest or teach that the projection hopper (16) is “capable of functioning as a smoke vent attachment,” as asserted by the Examiner.

Moreover, with respect to the plurality of feet and arm structures that are provided on the smoke vent attachment, the Examiner merely states that “it would have been

an obvious matter of design choice to have these features as recited in the claims. Applicants disagree, and respectfully request that the Examiner provide support for his position.

The Examiner further cites the Helman et al. reference for disclosing the claimed smoke vent attachment of the present invention. A top 178 having a centrally located hole 180 is referred to as disclosing the claimed smoke vent attachment. Contrary to the Examiner's assertion, the top 178 is not for venting smoke. Rather, the top 178 provides a hole 180 through which a measured amount of corn kernels are poured into for popping in the chamber 94. During operation, the hole 180 is covered with a measuring disk 207. Rather than the top 178, the Helman et al. reference provides holes 176 for venting access heat from the popcorn maker 10 (see col. 11, lines 41-43 and Fig. 1).

Moreover, the cylinder 186, referred to by the Examiner as disclosing the elongated external vent pipe for channeling the smoke away from the roaster, is for carrying the corn kernels dropped through the hole 180 in the top 178. The cylinder 186 in no way performs the function of venting smoke. Accordingly, the Helman et al. reference also does not disclose or suggest the claimed exhaust opening in the cover, nor the smoke vent attachment as described in claim 15. Accordingly, even if Helman et al. were combined with Hatanaka et al., the resulting device still would not disclose or suggest the claimed cover and smoke vent attachment features of the present invention. For these reasons, claims 15-18 are allowable over Hatanaka et al. and Helman et al., alone or in combination.

For all of the above reasons, Applicants request reconsideration and allowance of the claimed invention. The Examiner should contact Applicants' undersigned attorney if a telephone conference would expedite prosecution.

Respectfully submitted,

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February 16, 2007

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RELATED PROCEEDINGS APPENDIX

None.